

CONTENTS

VOLUME 8 (1969)

Editorial	
by F. H. SOBELS (Leiden, The Netherlands)	4-6
The mutability toward ultraviolet light of recombination-deficient strains of <i>Escherichia coli</i>	
by EVELYN M. WITKIN (Brooklyn, N.Y., U.S.A.) (Rec'd December 24th, 1968)	9-14
"Excision repair" and dose-modification: Questions raised by radiobiological experiments with acriflavine	
by TIKVAH ALPER AND BRENDA HODGKINS (London, Great Britain) (Rec'd December 24, 1968)	15-23
Lethal and mutagenic effects of irradiated medium on <i>Escherichia coli</i>	
by V. L. CHOPRA (Edinburgh, Great Britain) (Rec'd January 6th, 1969)	25-33
Chemical mutagenesis in <i>E. coli</i> B/R; The influence of repair systems for U.V. damage	
by C. H. CLARKE (Norwich, Great Britain) (Rec'd January 16th, 1969)	35-41
Comparison of the complementation and genetic maps of closely linked nonallelic markers on linkage group I of <i>Neurospora crassa</i>	
by F. J. DE SERRES (Oak Ridge, Tenn. U.S.A.) (Rec'd December 4th, 1968)	43-50
Genetic studies of urease mutants in <i>Neurospora crassa</i>	
by H. G. KØLMARK (Uppsala, Sweden) (Rec'd February 4th, 1969)	51-63
Evaluation of the genetic alterations induced by chemical mutagens in <i>Schizosaccharomyces pombe</i>	
by N. LOPRIENO, R. GUGLIELMINETTI, S. BONATTI AND A. ABBONDANDOLO (Pisa, Italy) (Rec'd January 2nd, 1969)	65-71
Diepoxybutane pretreatment effects on UV-inactivation and photoreactivation of <i>Saccharomyces cerevisiae</i>	
by B. J. KILBEY (Edinburgh, Great Britain) (Rec'd January 21st, 1969)	73-78
Studies on mutations induced by ultraviolet radiation in <i>Paramecium aurelia</i> with special emphasis on photoversal	
by R. F. KIMBALL (Oak Ridge, Tenn., U.S.A.) (Rec'd January 20th, 1969)	79-89
Studies on a recombination-deficient mutant of <i>Drosophila</i> I. Dominant lethals	
by W. A. F. WATSON (Aberdeen, Great Britain) (Rec'd December 30th, 1968)	91-100
Radiation-induced loss of ring-X chromosomes in the germ cells of <i>Drosophila melanogaster</i> males	
by B. LEIGH (Leiden, The Netherlands) (Rec'd February 5th, 1969)	101-109
A study of the causes underlying the differences in radiosensitivity between mature spermatozoa and late spermatids in <i>Drosophila</i>	
by F. H. SOBELS (Leiden, The Netherlands) (Rec'd January 15th, 1969)	111-125
Genetic effects of tritiated thymidine and evidence for its incorporation into a cytoplasmic component of the adult testis of <i>Drosophila melanogaster</i>	
by WILLIAM D. KAPLAN AND PER OFTEDAL (Duarte, Calif., U.S.A. and Oslo, Norway) (Rec'd January 3rd, 1969)	127-138
The mutagenic activity of the pyrrolizidine alkaloid heliotrine in <i>Drosophila melanogaster</i> . II. Chromosome rearrangements	
by N. G. BRINK (Bedford Park, Australia) (Rec'd November 11th, 1968)	139-146
Fine structure analysis of a chromosome segment in <i>Drosophila melanogaster</i> . Analysis of ethyl methanesulphonate-induced lethals	
by ELIEZER LIFSHYTZ AND RAPHAEL FALK (Jerusalem, Israel) (Rec'd December 12th, 1968)	147-155

The mutational spectrum produced in <i>Drosophila</i> by <i>N</i> -methyl- <i>N'</i> -nitro- <i>N</i> -nitrosoguanidine by LUOLIN S. BROWNING (Houston, Texas, U.S.A.) (Rec'd January 31st, 1969)	157-164
The progressive approximation, with storage, of the spectrum of TEM-induced chromosomal changes in <i>Drosophila</i> sperm to that found after irradiation by H. SLIZYNSKA (Edinburgh, Great Britain) (Rec'd February 4th, 1969)	165-175
Frequency pattern of mosaic and whole-body mutants induced by ionizing radiations in post-meiotic cells of the male silkworm by YATARO TAZIMA AND KIMIHARU ONIMARU (Misima, Japan) (Rec'd January 2nd, 1969)	177-190
Gene and chromosome mutation after large fractionated or unfractionated radiation doses to mouse spermatogonia by M. F. LYON AND T. MORRIS (Harwell, Berks., Great Britain) (Rec'd November 4th, 1968)	191-198
Mutagenic alkylating agents as growth inhibitors and carcinogens by P. C. KOLLER (London, Great Britain) (Rec'd January 10th, 1969)	199-206
The splitting of human chromosomes into chromatids in the absence of either DNA or protein synthesis by SHELDON WOLFF (San Francisco, Calif., U.S.A.) (Rec'd December 30th, 1968)	207-214
Different modes of loss of photoreversibility of mutation and lethal damage in ultraviolet-light resistant and sensitive bacteria by H. NISHIOKA AND C. O. DOUDNEY (Philadelphia, Pa.) (Rec'd May 7th, 1969)	215-228
Reaction rates and biological action of alkylating agents. Preliminary report on bacterial and mutagenic action in <i>E. coli</i> by I. TURTÓCZKY AND L. EHRENBURG (Stockholm, Sweden) (Rec'd May 8th, 1969)	229-238
The radiation sensitivity of nuclease mutants in <i>Neurospora crassa</i> by I. UNO AND T. ISHIWAKA (Tokyo, Japan) (Rec'd May 12th, 1969)	239-246
Reversion of acridine mustard-induced <i>ad-3</i> mutants of <i>Neurospora crassa</i> by D. J. BRUSICK (Normal, Ill.) (Rec'd June 13th, 1969)	247-254
Specificity for spontaneous and induced forward mutation at several gene loci in <i>Aspergillus nidulans</i> by T. ALDERSON AND M. J. HARTLEY (Cambridge, Great Britain) (Rec'd June 12th, 1969)	255-264
Effects of liquid holding on the induction of mutations in an ultraviolet-sensitive strain of <i>Aspergillus nidulans</i> by GISELA WOHLRAB AND R. W. TUVESEN (Urbana, Ill.) (Rec'd June 9th, 1969)	265-275
Desynapsis und Chromosomenbrüche in einer Mutante von <i>Pisum sativum</i> by HANS-DIETER KLEIN (Bonn, Deutschland) (Eingeg. den 9. Mai, 1969)	277-284
Abnormal chromosome 10 and <i>R</i> paramutation in maize by R. ALEXANDER BRINK (Madison, Wisc.) (Rec'd May 27th, 1969)	285-302
Frequency of X-ray-induced crossing-over in structurally different types of chromosome of <i>Drosophila melanogaster</i> females by JAAKKO PURO (Turku, Finland) (Rec'd June 25th, 1969)	303-316
Action des UV sur la recombinaison génétique, à la suite d'irradiations de cellules polaires de Drosophiles femelles, hétérozygotes pour les marqueurs localisés sur le chromosome III par C. PRUDHOMMEAU ET J. PROUST (Orsay, France) (Reçu le 8 avril, 1969)	317-326
On the nature of <i>Y</i> chromosome fragments induced in <i>Drosophila melanogaster</i> females. I. Immature oocytes by JOHN H. WILLIAMSON (Oak Ridge, Tenn. and Riverside, Calif.) (Rec'd May 12th, 1969)	327-335
Genetic effects of LSD treatment on the post-meiotic stages of spermatogenesis in <i>Drosophila melanogaster</i> by ELEANOR H. MARKOWITZ, GEORGE E. BROSSEAU JR. AND ETAN MARKOWITZ (Iowa City, Iowa) (Rec'd April 28th, 1969)	337-342

Comparison of radiosensitivity among different silkworm strains with respect to the killing effect on the embryos by AKIO MURAKAMI (Misima, Japan and Bowling Green, Ohio) (Rec'd March 26th, 1969)	343-352
Chromosome breakage and complete genic mutation production in molecular terms by N. P. DUBININ AND V. N. SOYFER (Moscow, U.S.S.R.) (Rec'd March 4th, 1969)	353-365
Radiation-induced chromosome damage in human peripheral blood lymphocytes <i>in vitro</i> . I. RBE and dose-rate studies with fast neutrons by D. SCOTT, HEATHER SHARPE, A. L. BATCHELOR, H. J. EVANS AND D. G. PAPWORTH (Harwell, Didcot, Berks., Great Britain) (Rec'd May 28th, 1969)	367-381
Factors influencing chromosome aberration yields in the human peripheral leukocyte system by M. A. BENDER AND J. G. BREWEN (Oak Ridge, Tenn.) (Rec'd June 12th, 1969)	383-399
Nonrandom rejoicing in the formation of chromatid interchanges: Variations through the cell cycle and the effect of chromosome pairing by J. G. BREWEN, G. OLIVIERI, H. E. LUIPPOLD AND F. G. PEARSON (Oak Ridge, Tenn.) (Rec'd May 20th, 1969)	401-408
An immediate effect of inhibition of DNA synthesis on cell division in a Lon strain of <i>Escherichia coli</i> by MICHAEL H. L. GREEN, JOHN DONCH AND JOSEPH GREENBERG (Palo Alto, Calif.) (Rec'd April 14th, 1969)	409-411
Analysis of photoenzymatic repair of UV lesions in DNA by single flashes. IV. Mutations affecting the number of photoreactivating enzyme molecules in <i>E. coli</i> cells by WALTER HARM (Dallas, Texas) (Rec'd June 9th, 1969)	411-415
The influence of a mutation to UV and X-ray sensitivity on the γ -ray induction of reversion to prototrophy in <i>E. coli</i> by M. G. STERN (Leiden, The Netherlands) (Rec'd June 3rd, 1969)	416-418
Interphase sensitivity to inhibition of DNA synthesis by M. E. FERNÁNDEZ-GÓMEZ, A. GONZÁLEZ-FERNÁNDEZ, G. GIMÉNEZ-MARTÍN AND J. F. LÓPEZ-SÁEZ (Madrid, Spain) (Rec'd May 9th, 1969)	419-421
Non-randomness in the distribution of Co- γ -ray-induced gaps between chromosomes in <i>Vicia faba</i> by A. LAZÁNYI (Cluj, Roumania) (Rec'd April 28th, 1969)	422-423
Inhibitory effect of 5-fluorodeoxyuridine on the repair of γ -ray-induced lesions in barley chromosomes by KOJI YAMAMOTO AND HIKOYUKI YAMAGUCHI (Tokyo, Japan) (Rec'd May 28th, 1969)	424-427
Inhibition by caffeine of the repair of γ -induced chromosome breaks in barley by KOJI YAMAMOTO AND HIKOYUKI YAMAGUCHI (Tokyo, Japan) (Rec'd May 28th, 1969)	428-430
Radiation-sensitive mutants of T4D. I. T4y: A new radiation-sensitive mutant; effect of the mutation on radiation survival, growth and recombination by JOHN MICHAEL BOYLE AND N. SYMONDS (Brighton, Sussex, Great Britain) (Rec'd July 2nd, 1969)	431-439
Radiation-sensitive mutants of T4D. II. T4y: Genetic characterization by JOHN MICHAEL BOYLE (Brighton, Sussex, Great Britain) (Rec'd July 2nd, 1969)	441-449
Gene-specific effect of hydroxylamine in induction of <i>amber</i> mutations in bacteriophage T4B by S. I. ALIKHANIAN, V. K. GORDEEV, V. I. POCHTAREVA, V. Z. POGOSOV AND E. S. PIRUZIAN (Moscow, U.S.S.R.) (Rec'd July 2nd, 1969)	451-456
Acridine-induced mutants of bacteriophage 434hy by A. TOUSSAINT AND N. LEFEBVRE (Brussels, Belgium) (Rec'd June 20th, 1969)	457-466
A mutant of <i>Escherichia coli</i> K12 exhibiting varying ultraviolet sensitivities depending on the temperature of incubation after irradiation. II. Cross-sensitivity, recovery in liquid and genetic analysis by MITSUOKI MORIMYO, YOSHIE SHIMAZU AND KENSHI SUZUKI (Chiba City, Japan) (Rec'd April 29th, 1969)	467-479

DNA synthesis in sensitive and resistant mutants of <i>Escherichia coli</i> B after ultraviolet irradiation by KENDRIC C. SMITH (Stanford, Calif.) (Rec'd July 16th, 1969)	481-495
Radiation-sensitive and recombinationless mutants of <i>Salmonella typhimurium</i> by A. EISENSTARK, R. EISENSTARK, J. VAN DILLEWIJN AND A. RÖRSCH (Rijswijk, The Netherlands) (Rec'd July 5th, 1969)	497-504
Recombination in <i>Escherichia coli</i> . III. Mapping by the gradient of transmission by P. G. DE HAAN, W. P. M. HOEKSTRA, C. VERHOEF AND H. S. FELIX (Utrecht, The Netherlands) (Rec'd September 1st, 1969)	505-512
Ultraviolet-induced mutations in <i>Streptomyces indicus</i> by S. L. CHAKRABARTY (Calcutta, India) (Rec'd August 5th, 1969)	513-520
Spontaneous and induced reversion of ICR-170-induced xanthine dehydrogenase mutants of <i>Aspergillus nidulans</i> by THOMAS ALDERSON (Cambridge, Great Britain) (Rec'd June 20th, 1969)	521-529
Mutagenesis of <i>Anacystis nidulans</i> by N-methyl-N'-nitro-N-nitrosoguanidine and UV irradiation by YUKIO ASATO AND CLAIR E. FOLSOME (Honolulu, Hawaii) (Rec'd August 12th, 1969)	531-536
Information from ICR-170-induced mutations on the structure of the <i>pyrimidine-3</i> locus in <i>Neurospora</i> by ALAN RADFORD (Stanford, Calif.) (Rec'd July 18th, 1969)	537-544
The effects of UV-light post-treatments on the survival characteristics of 21 UV-sensitive mutants of <i>Saccharomyces cerevisiae</i> by JAMES M. PARRY AND ELIZABETH M. PARRY (Swansea, Wales, Great Britain) (Rec'd May 16th, 1969)	545-556
High-frequency production of respiratory mutants in yeast under nutritional deficiencies by SUSUMU NAGAI (Nara, Japan) (Rec'd May 28th, 1969)	557-564
Effect of storage of alkylated chromosomes on the mutagenic effectiveness of monofunctional alkylation by A. H. KHAN (Cambridge, Great Britain) (Rec'd July 2nd, 1969)	565-571
Dominant effects of recessive lethals in mice. II. Viability and mating ability by K. G. LÜNING (Stockholm, Sweden) (Rec'd May 28th, 1969)	573-580
Mutagenesis with methyl methanesulfonate in mouse by JEAN MOUTSCHEN (Liège, Belgium) (Rec'd July 25th, 1969)	581-588
Strain and sex variations in the sensitivity of mice to dominant-lethal induction with ethyl methanesulfonate by W. M. GENEROSO AND W. L. RUSSELL (Oak Ridge, Tenn.) (Rec'd August 18th, 1969) .	589-598
Über das zeitliche Verhalten strahleninduzierter Chromosomenaberrationen beim Menschen von E. SCHMID UND M. BAUCHINGER (München-Neuherberg, Deutschland) (Eingeg. am 12 Juni 1969)	599-611
Variations in radiosensitivity during the cell cycle in a marsupial cell line by Y. A. E. BICK AND J. K. BROWN (Hobart and Lucas Heights, Australia) (Rec'd July 2nd, 1969)	613-622
The effects of cytoxin on the chromosomes of mouse bone marrow by P. K. DATTA AND E. SCHLEIERMACHER (Heidelberg, Germany) (Rec'd June 4th, 1969)	623-628
Sensitivity of the newly synthesized and template DNA of lymphoma cells to damage by methyl methanesulphonate, and the nature of associated "repair" processes by B. W. FOX AND MARGARET FOX (Manchester, Great Britain) (Rec'd June 30th, 1969)	629-638
Non-semiconservative incorporation of labelled 5-bromo-2'-deoxyuridine in lymphoma cells treated with low doses of methyl methanesulphonate by S. R. AYAD, MARGARET FOX AND B. W. FOX (Manchester, Great Britain) (Rec'd June 30th, 1969)	639-645

Repair of <i>fil</i> ⁺ phenotype by streptomycin by A. G. SKAVRONSKAYA AND G. B. SMIRNOV (Moscow, U.S.S.R.) (Rec'd July 24th, 1969)	647-650
UV-induction of reversions to prototrophy susceptible to mutation frequency decline by A. G. SKAVRONSKAYA AND G. B. SMIRNOV (Moscow, U.S.S.R.) (Rec'd July 24th, 1969)	651-655
The germination stage in rice seed that produces the greatest yield of radiation-induced mutations by HIKOYUKI YAMAGUCHI (Tokyo, Japan) (Rec'd July 2nd, 1969)	655-657
Locus of the mutation responsible for the <i>Hcr</i> property of strain WP-2 <i>hcr</i> of <i>Escherichia coli</i> by JOHN DONCH AND JOSEPH GREENBERG (Palo Alto, Calif.) (Rec'd June 27th, 1969)	658
Mutants of <i>Salmonella typhimurium</i> LT2 sensitive to ultraviolet and temperature by V. N. POKROVSKÝ, V. I. ZLATEV, I. V. ANDREEVA AND A. G. SKAVRONSKAYA (Moscow, U.S.S.R.) (Rec'd July 7th, 1969)	659-662
Frequency and types of chlorophyll mutants induced in flax (<i>Linum usitatissimum</i> L.) by EMS, NMU and TEM by A. MÁRKI AND MARIA BIANU (Cluj, Romania) (Rec'd August 7th, 1969)	663-665
Effect of dimethyl sulfoxide on the mutagenic efficiency of ethyl methanesulfonate in seed treatments by R. S. RANA AND H. C. MATHUR (New Delhi, India) (Rec'd July 14th, 1969)	666-667
Chromosome exchange dose-response curve saturation and distortion in <i>Tradescantia</i> by JOHN R. K. SAVAGE (Harwell, Didcot, Berks., Great Britain) (Rec'd July 14th, 1969)	668-670
Announcement	671
Errata	671
Author Index, Vol. 8 (1969)	672-673
Subject Index, Vol. 8 (1969)	674-679
Contents, Vol. 8 (1969)	680-684

